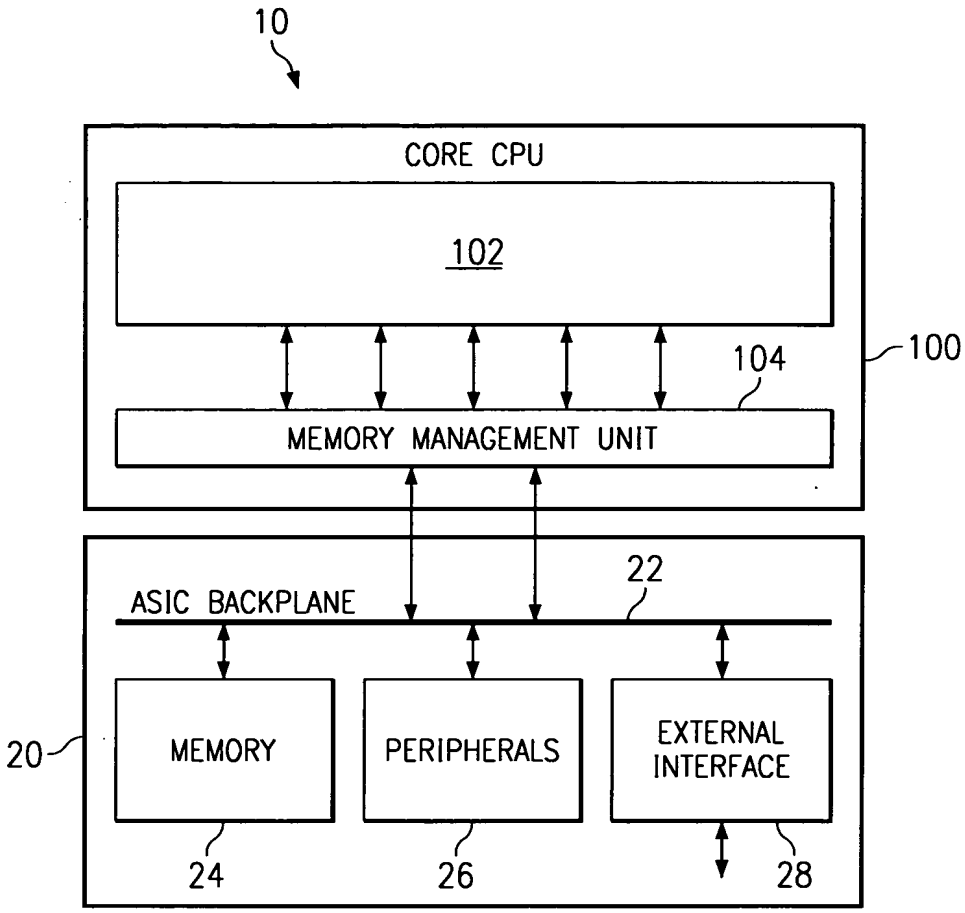


FIG. 1

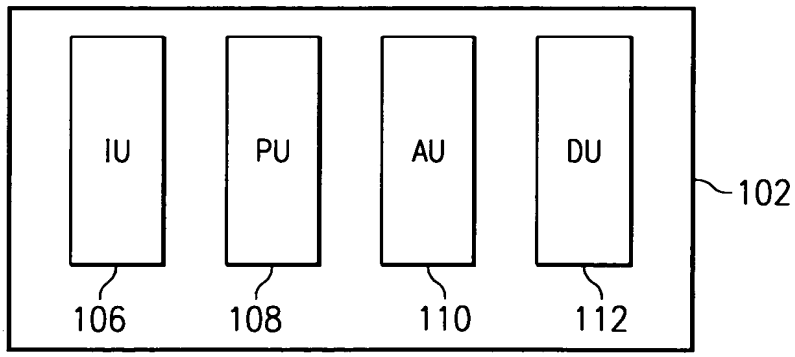


FIG. 2

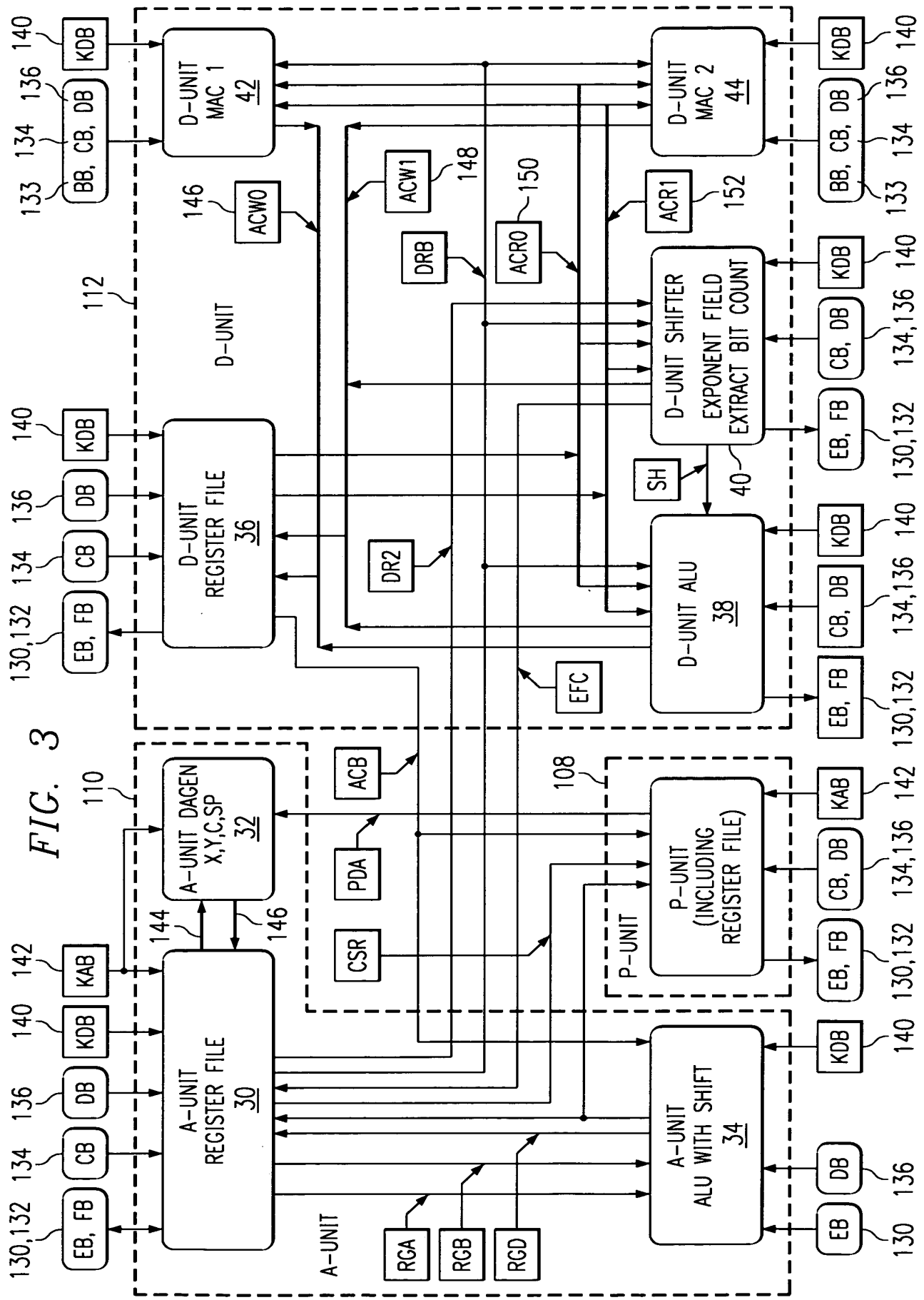

A-UNIT
A-UNIT REGISTER FILE 30
A-UNIT DAGEN X,Y,C,SP 32
A-UNIT ALU WITH SHIFT 34
P-UNIT
P-UNIT (INCLUDING REGISTER FILE)
D-UNIT
D-UNIT REGISTER FILE 36
D-UNIT ALU 38
D-UNIT SHIFTER EXPONENT FIELD EXTRACT BIT COUNT
D-UNIT MAC 1 42
D-UNIT MAC 2 44
EB, FB
CB
DB
KDB
KAB
BB, CB, DB
RGA
RGB
RGD
CSR
PDA
ACB
DR2
DRB
ACW0
ACW1
ACR0
ACR1
SH
EFC
130,132
134
136
140
142
133
146
148
150
152
144
40
108
110
112

FIG. 3

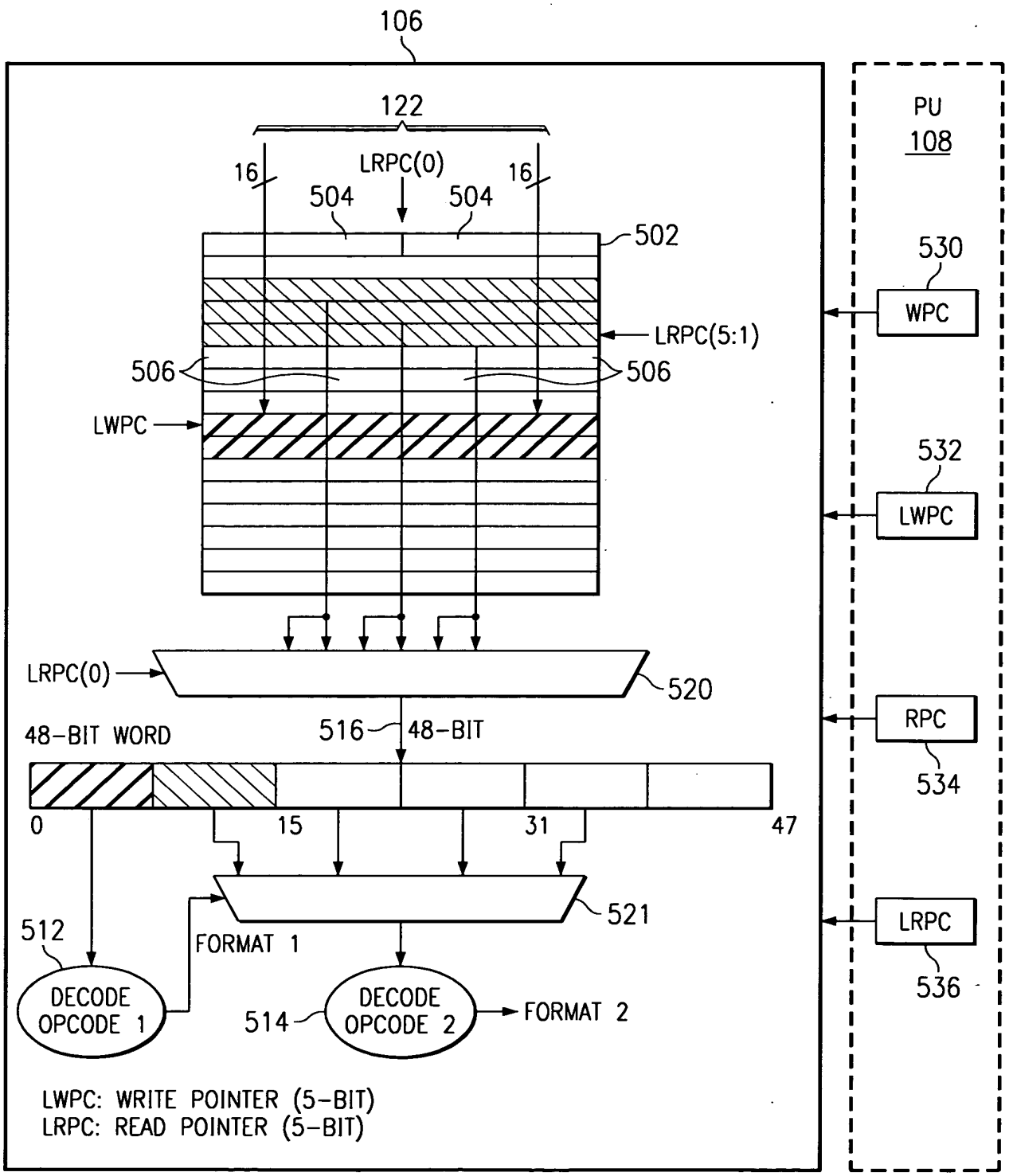

106
122
16
LRPC(0)
16
504
504
502
PU
108
530
WPC
LRPC(5:1)
506
506
LWPC
532
LWPC
LRPC(0)
520
48-BIT WORD
516
48-BIT
RPC
534
0
15
31
47
521
512
FORMAT 1
LRPC
536
DECODE OPCODE 1
514
DECODE OPCODE 2
FORMAT 2
LWPC: WRITE POINTER (5-BIT)
LRPC: READ POINTER (5-BIT)

FIG. 4

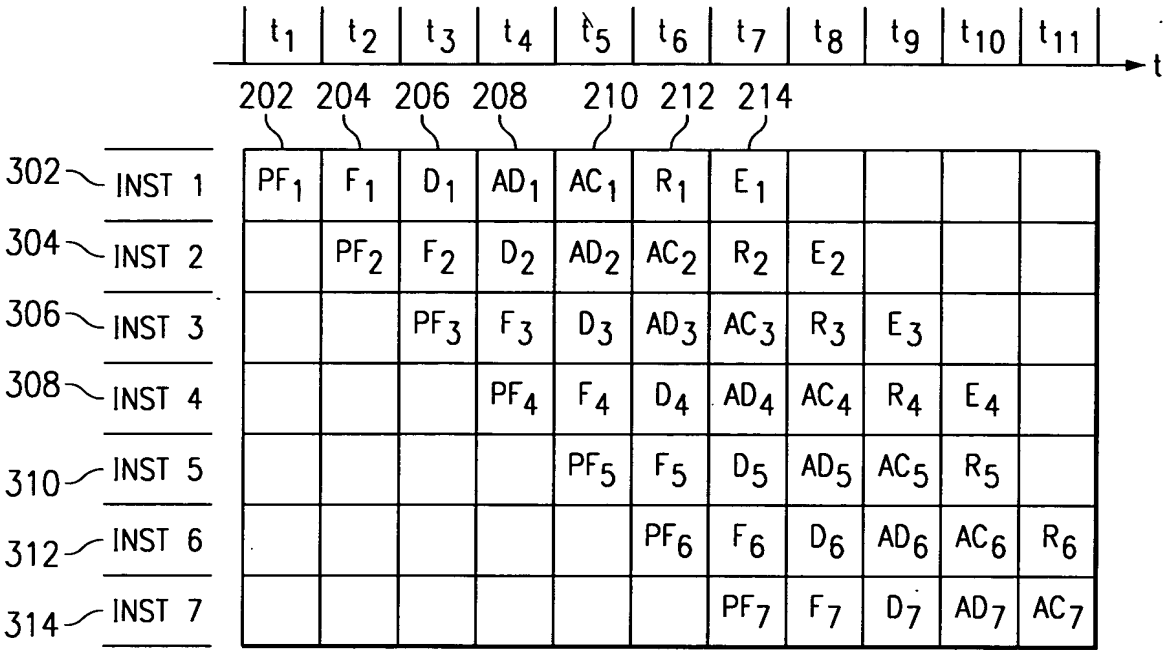


FIG. 5

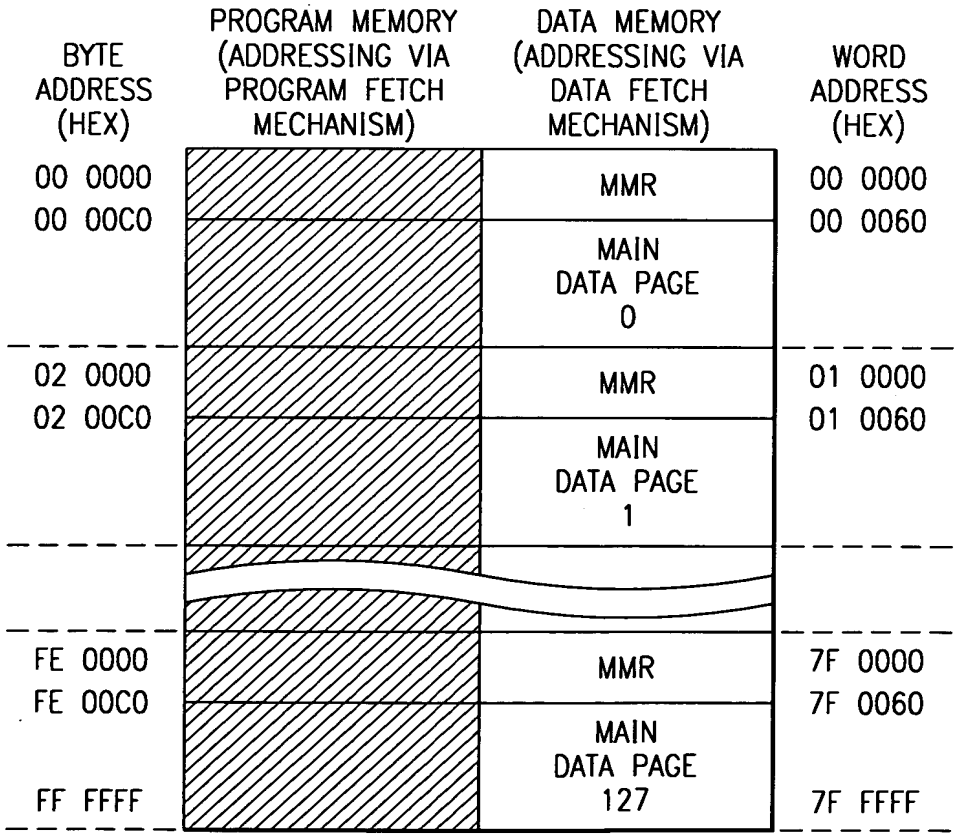


FIG. 7

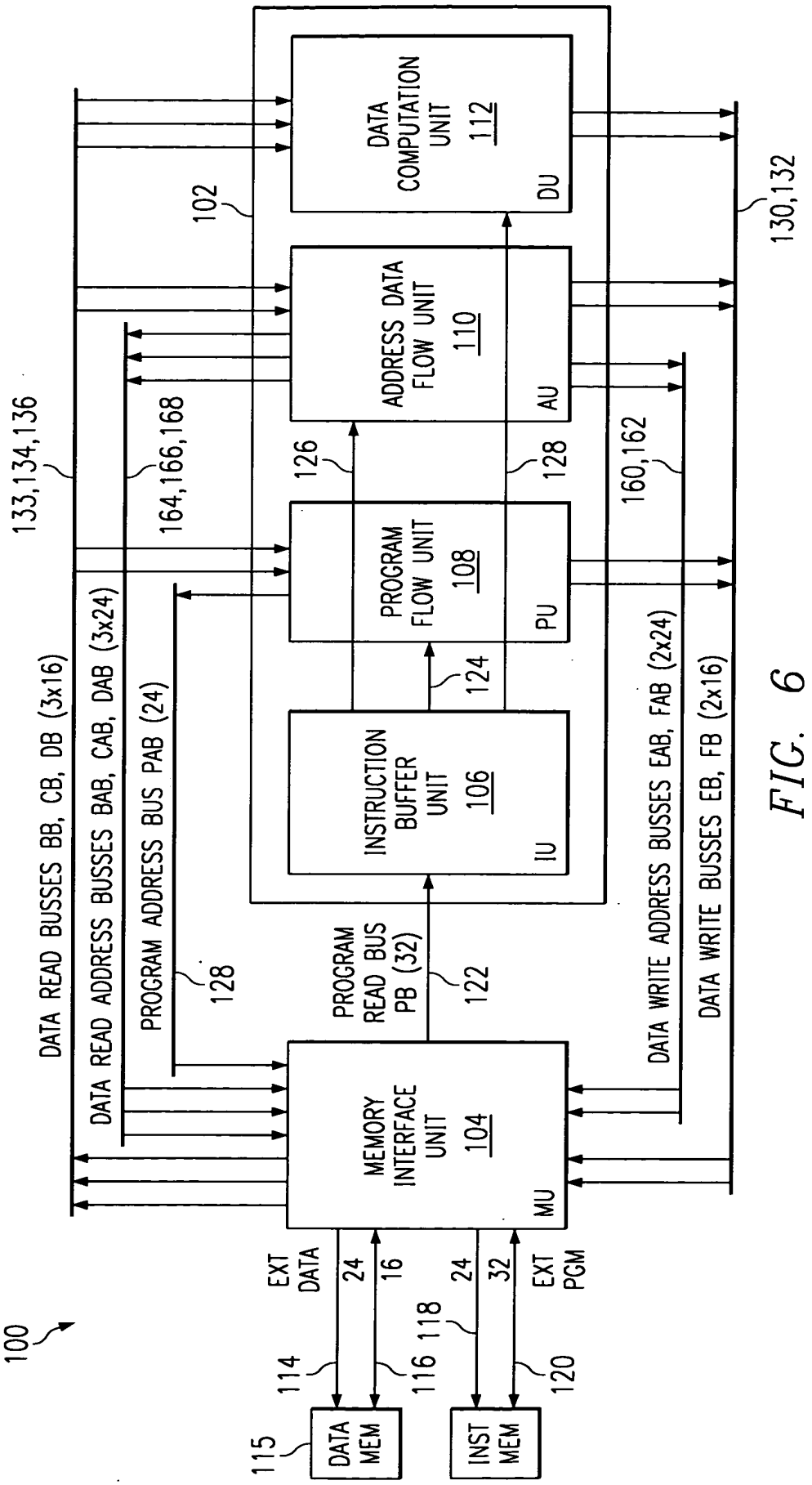

100
DATA READ BUSSES BB, CB, DB (3x16)
DATA READ ADDRESS BUSSES BAB, CAB, DAB (3x24)
PROGRAM ADDRESS BUS PAB (24)
PROGRAM READ BUS PB (32)
DATA WRITE ADDRESS BUSSES EAB, FAB (2x24)
DATA WRITE BUSSES EB, FB (2x16)
133,134,136
164,166,168
160,162
130,132
102
126
128
122
124
MEMORY INTERFACE UNIT 104
MU
INSTRUCTION BUFFER UNIT 106
IU
PROGRAM FLOW UNIT 108
PU
ADDRESS DATA FLOW UNIT 110
AU
DATA COMPUTATION UNIT 112
DU
EXT DATA
24
16
24
32
EXT PGM
114
116
118
120
115
DATA MEM
INST MEM

FIG. 6

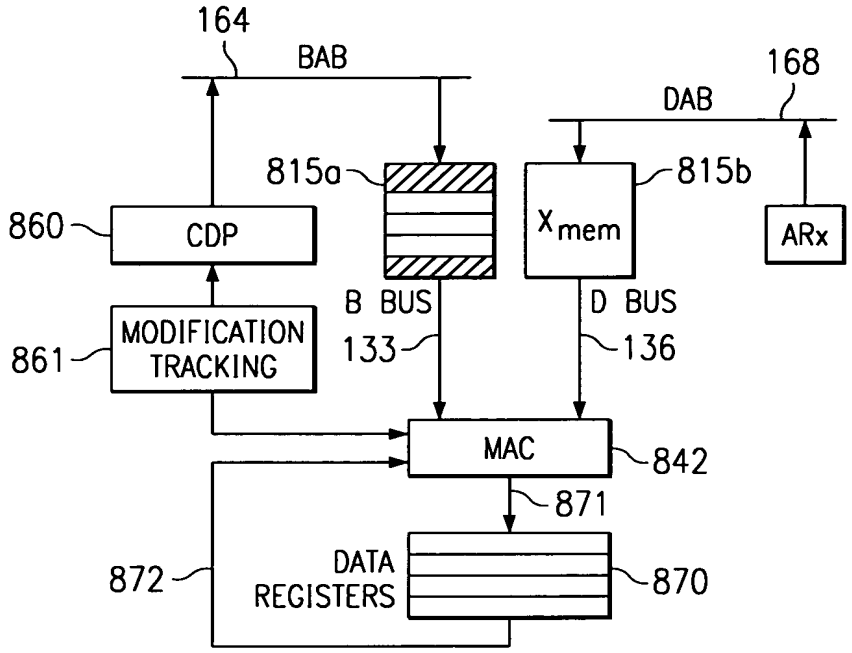


FIG. 8

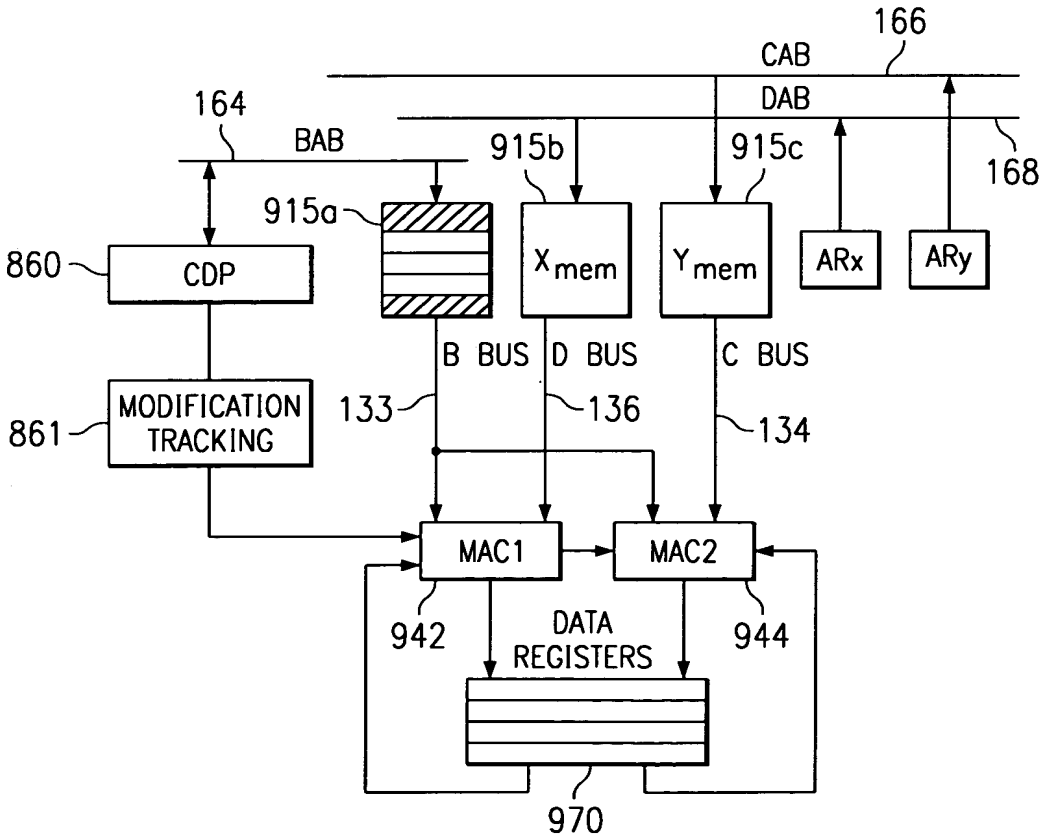


FIG. 9

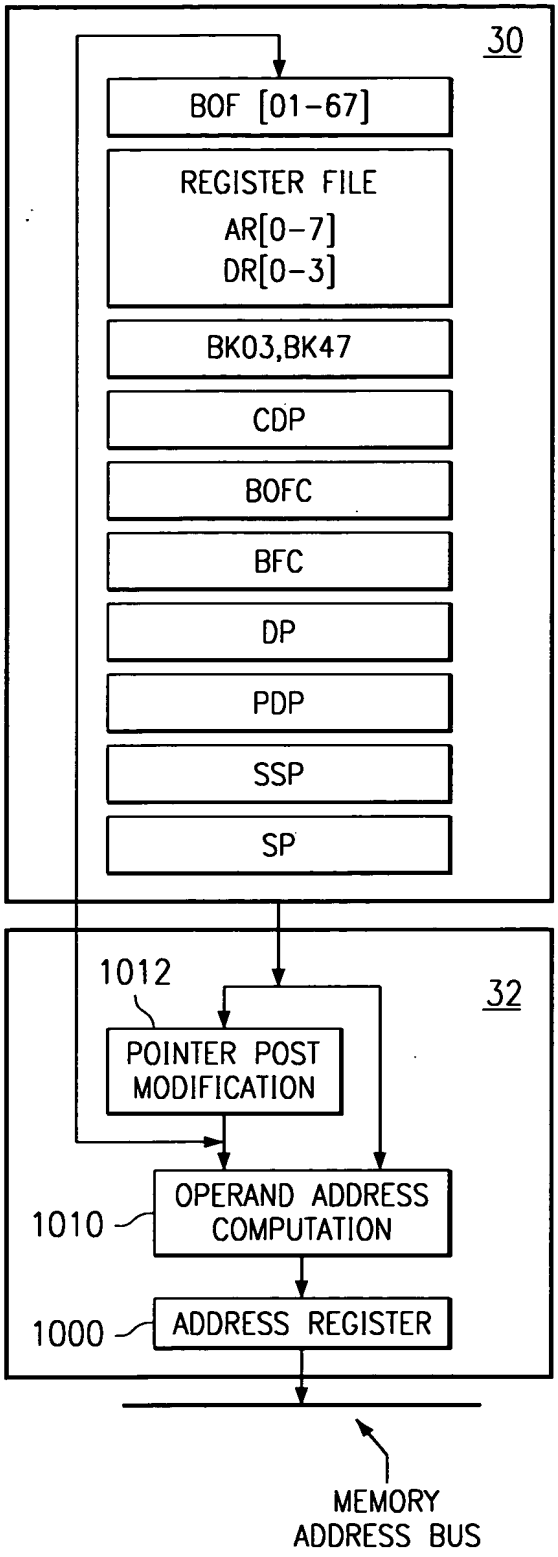


FIG. 10

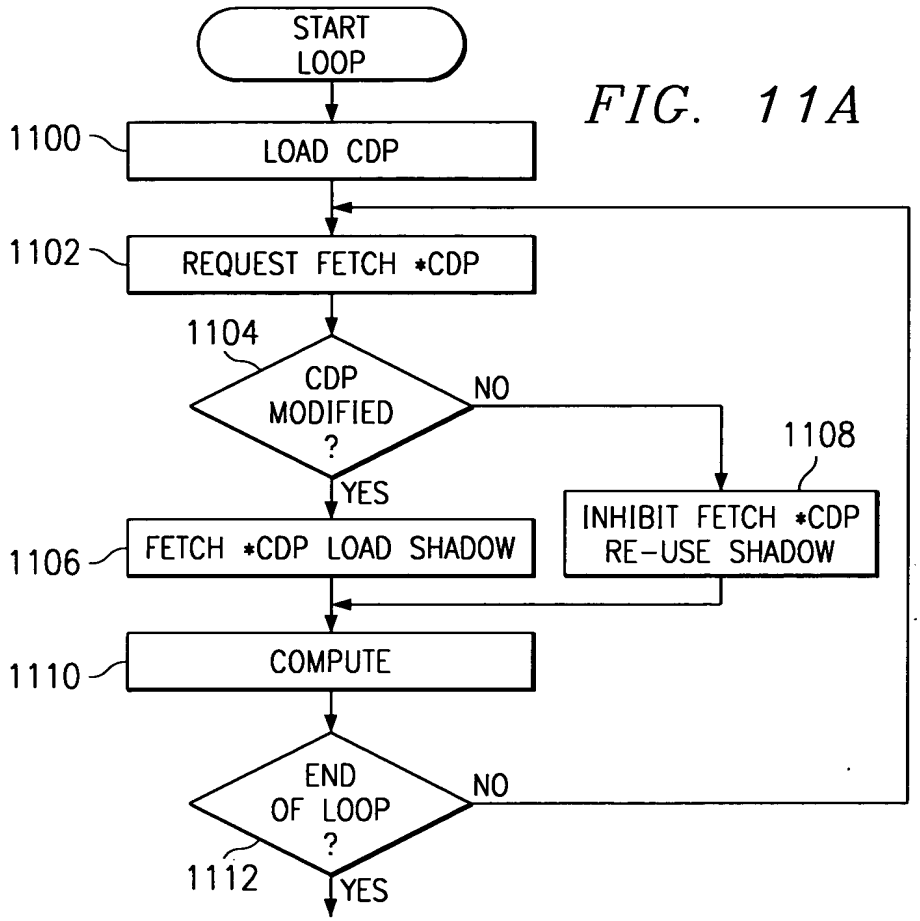
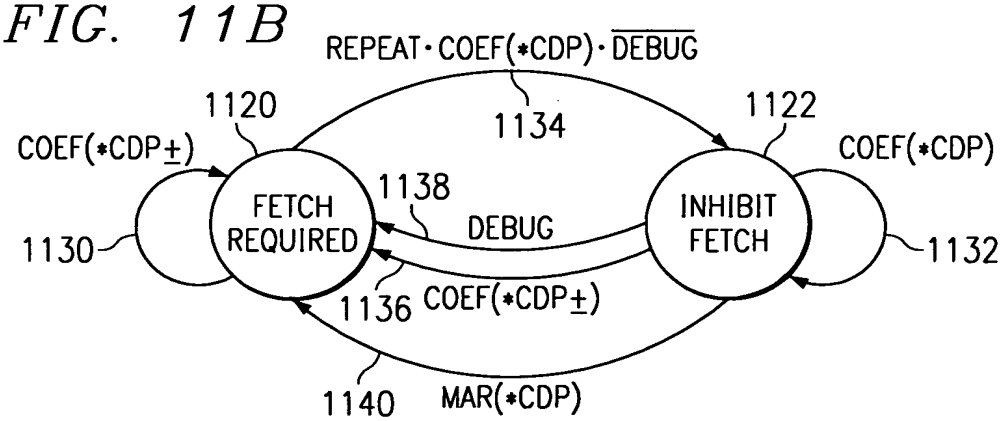


FIG. 11A

FIG. 11B



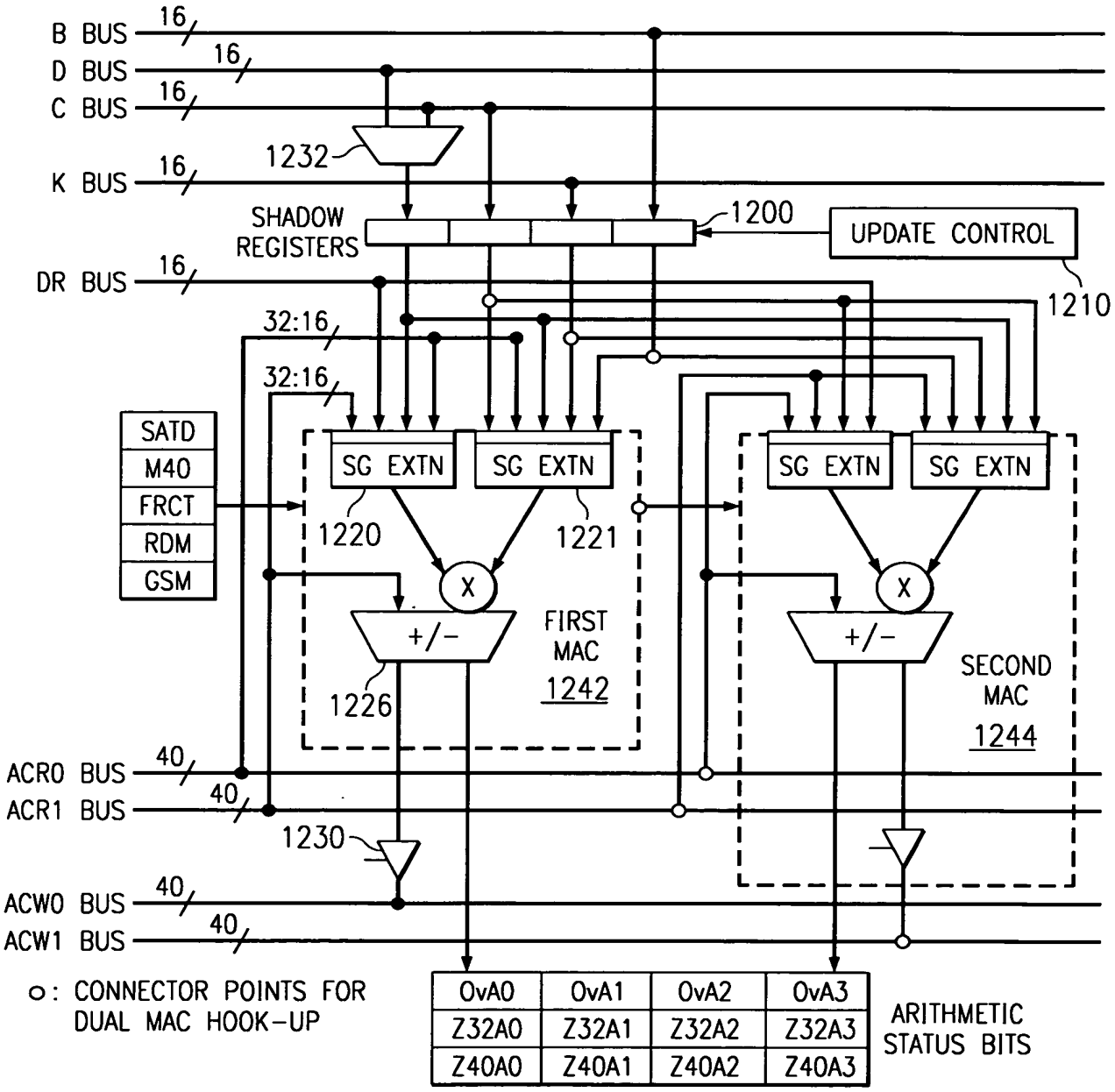

B BUS
D BUS
C BUS
K BUS
DR BUS
ACR0 BUS
ACR1 BUS
ACW0 BUS
ACW1 BUS
16
40
1232
1230
SHADOW REGISTERS
1200
UPDATE CONTROL
1210
32:16
SATD
M40
FRCT
RDM
GSM
SG EXTN
1220
1221
X
+/−
FIRST MAC
1242
1226
SECOND MAC
1244
o: CONNECTOR POINTS FOR DUAL MAC HOOK-UP
OvA0
OvA1
OvA2
OvA3
Z32A0
Z32A1
Z32A2
Z32A3
Z40A0
Z40A1
Z40A2
Z40A3
ARITHMETIC STATUS BITS

FIG. 12

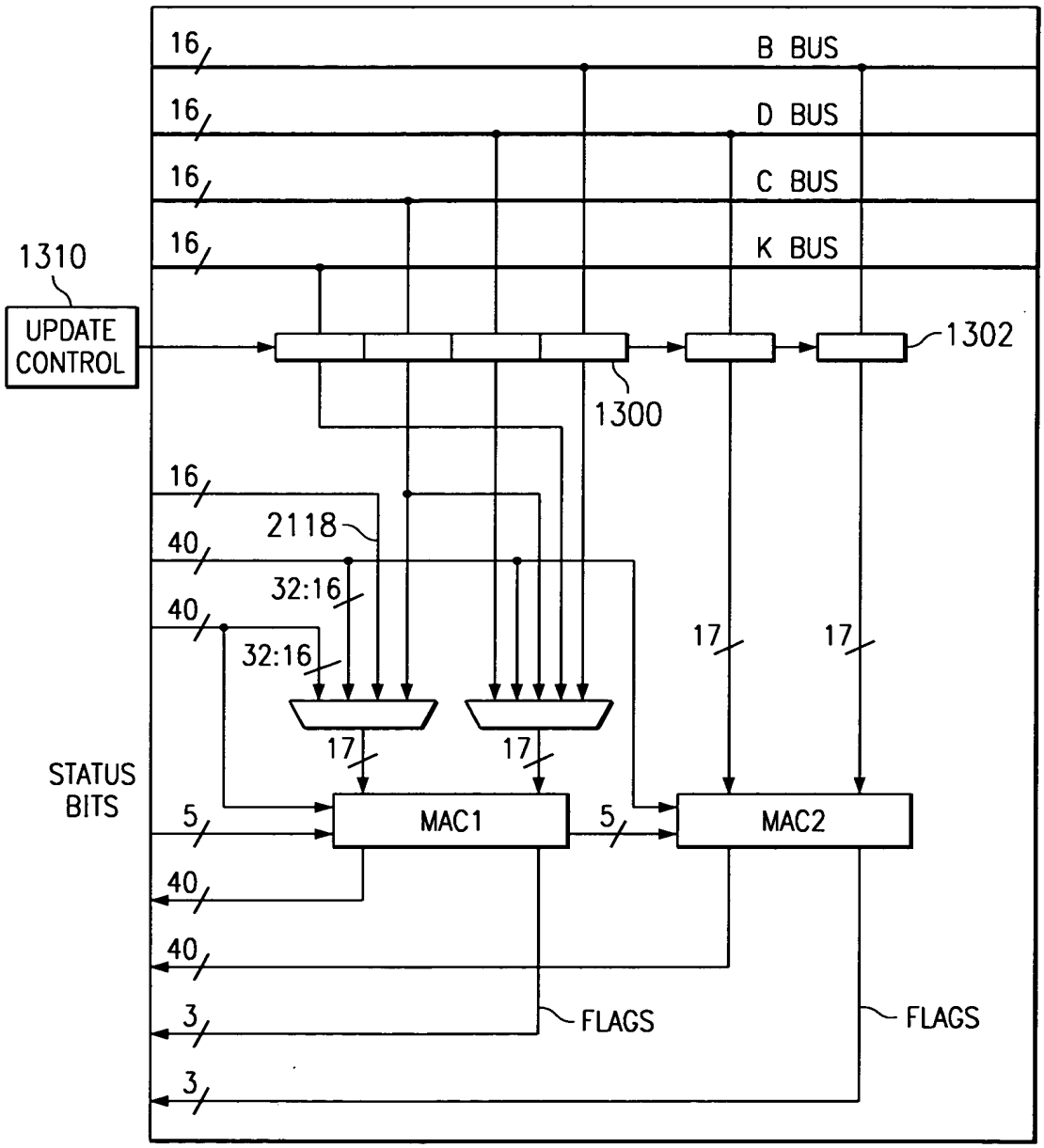

16
B BUS
16
D BUS
16
C BUS
16
K BUS
1310
UPDATE CONTROL
1302
1300
16
2118
40
32:16
40
32:16
17
17
17
17
STATUS BITS
5
MAC1
5
MAC2
40
40
3
FLAGS
FLAGS
3

FIG. 13

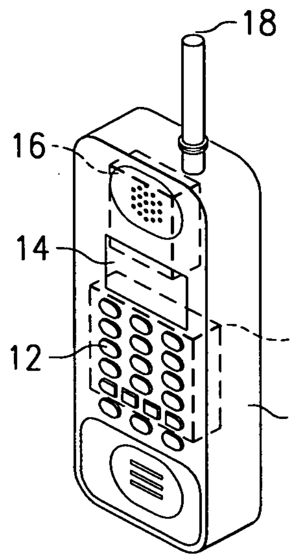


FIG. 14A

FIG. 14B